

## SAKSHAM

**Note:** The following themes are just guidelines to help you. You are free to think like an unconventional thinker and come up with great innovations. So do not limit yourselves to these problem statements.

Women play a significant role in agriculture, the world over. But the agricultural sector in many developing countries is under-performing, in part because women, who represent a crucial resource in agriculture and the rural economy through their roles as farmers, labourers and entrepreneurs, almost everywhere face more severe constraints than men in access to productive resources.

**Problem Statement :**Participants are invited to come up with innovative new agricultural devices or methods that will help the village women in efficiently completing the agricultural tasks like harvesting, threshing, looking after animal livestock, etc. Devising a new method or devices that can easily be used by the rural women to complete their task could be an example.

In India, one in four rural households spends more than half an hour walking to collect water. The situation isn't any brighter in urban areas, where 20 percent of households spend the same amount of time to reach water sources. Rural women have to walk, moreover, long distances to carry water and fetch firewood.

**Problem Statement :**Participants are invited to come up with new ideas and cost-efficient solutions to solve the problem of long distance travelling problem of the village women. Making an efficient plan for managing water resources around the village to ensure storage of total required amount of water for a household.

Firewood is the main source of cooking energy. Out of the 500 households surveyed, only 10 percent use LPG gas cylinders as its source of cooking energy. Due to the usage of *chulhas*, pollution is caused inside as well as outside the houses, which affects the health of the household members and the neighbors.

**Problem Statement :**Participants are invited to come up with innovative solutions to make use of new alternate energy source devices for cooking that will be easy for the rural women to use and which is not harmful for their health. Low cost easy to use solar energy cooking device could be an example.

Empowering women can bring about a remarkable transformation in the fortunes of a society. These change can be brought when women of the village came together to establish a self-help cooperative society to unleash their collective entrepreneurial capacity, augment their incomes and raise their standards of living.

**Problem Statement :**Participants are invited to come up with innovative ideas to increase the women participation in income-generating sectors including rearing livestock (cows, pigs and goats), basket weaving, dairy cooperatives, etc. Designing a low cost device which can easily be used by rural women to create a finished marketable product could be an example.

Rural women experience poor health and have less access to health care than urban women. One of the major causes of the poor health of rural women is due to lack of nutrients. Also women in rural villages during their pregnancies and also during severe health problem are unable to get proper knowledge which adversely affects their health.

**Problem Statement :**Participants are invited to provide a solution for the lack of information on health matters, unavailability of health centers and the absence of an emergency transferral system. A low cost device which can provide necessary health information or a way in which women can receive proper guidance and training required in treatment of any health disorder could be an example.

Numerous studies show that illiterate women have high levels of mortality, poor nutritional status, low earning potential, and little autonomy within the household. A woman's lack of education also has a negative impact on the health and well-being of her children. For instance, a recent survey in India found out that infant mortality is inversely related to mother's educational level. These stats are also very high in rural areas compared to urban areas.

**Problem Statement :** Participants are invited to come up with a proper solution which can ensure that women in the villages can gain basic education related to their day to day activities and also the village girls who receive basic primary education can get further education.

Violence against women is a manifestation of historically unequal power relations between men and women. Violence against women is one of the crucial social mechanisms by which women are forced into a subordinate position compared with men.

**Problem Statement :** Participants are invited to propose a solution for the problem of sanitation faced by the women in rural villages. A low cost easy to implement lavatory designed for women which can be used during pregnancy and also has low water requirements could be a solution.

**STRUCTURE:****Progress Report**

Teams will be required to submit one report on or before 15th September 2016 to [saksham@techfest.org](mailto:saksham@techfest.org). This report should contain the idea they are looking forward to work on. Submission is to be done by ALL the participants.

**Project Report Format****i. Title****ii. Abstract**

1. Objectives
2. Beneficiaries (For whom)
3. Value of results (Use)

**iii. Background****iv. Statement of Problem**

1. Succinct definition of problem (follows from material in the background section)

**v. Research**

1. Present methods of tackling the problem (if any)
2. Proposed Solution
3. Alternate solutions/approaches
4. Novelty of Approach: How is or will be your solution better than existing products that address the same problem?

**vi. Technical Report**

1. Description of concepts, theories or approach involved in the proposed solution.
2. Technical aspect of the proposed solution.
3. Detailed technical specifications and pictorial representations (block diagrams/ flow chart)
4. Description of the flow of operations demonstrating key features and functionality.
5. Performance estimate of the solution.
6. Experimentation done to establish the workability of the above.
7. A link to the video of the working model/ prototype.

**vii. Results**

1. Actual findings, significant output of tests and analysis (Must be readable)
2. Include problems encountered, credibility of results, accuracy estimates
3. Pros and cons of your solution
4. Utility of results

**viii. Application**

1. Your idea as a solution to the problem
2. Additional applications
3. Benefits to the users

**ix. Any other specific details****Project Report submission:**

The project report should be emailed to [saksham@techfest.org](mailto:saksham@techfest.org) with the subject Ideate: Saksham: Project Report: Team Id (For example Ideate: Saksham Project Report: **SK1234**). All the submissions should be emailed to [saksham@techfest.org](mailto:saksham@techfest.org). Teams must follow the following details for the submission:

1. The abstract must be submitted in pdf format only
2. Font: Verdana
3. Size: 11
4. Spacing between two lines: 6 pts
5. Spacing between two paragraphs: 10 pts
6. Bottom margin: 1 inch

**Prototype and Final Presentation:**

After declaration of the finalists, participants are required to improve upon the prototype/ working model of their project. They will also have to make a presentation covering the technical and financial aspects of their product in a detailed manner. This final presentation and the video will have to be submitted at [saksham@techfest.org](mailto:saksham@techfest.org) before 18th November 2016. The teams can, however, continue to work on their prototypes till 15th December 2016. The teams will have to bring their prototypes to be judged and showcased at Techfest 2016-17 during 16th to 18th December 2016. The working prototype should be as close as possible to the product that the team intends to present to the end user. This would also help in deciding a better estimate of the cost of the prototype, reflecting closely the actual cost of the product.

**JUDGING:****General Rules:**

1. One of the team members must be a **female participant**.
2. The competition is open to all college students and research scholars. All projects being displayed will have a fair chance of receiving further development opportunities offered by funding organizations and Venture capitalists.
3. Every team has to register online on our website for the competition. A registration number will be allocated to the team on registration which shall be used for future references.
4. A team can register at any point of time before 18th November, 2016 and can submit final abstract and video (as mentioned in the structure).
5. The decision of the judges shall be treated as final and binding on all. Techfest has all the rights to verify the identity and accuracy of the details provided by the participants.
6. No responsibility will be held by Techfest, IIT Bombay for any late, lost or misdirected entries.
7. The idea presented by the teams should be original (not protected by means of patent/copyright/technical publication by anyone).
8. Note that at any point of time the latest information will be that which is on the website. However, registered participants will be informed through mail about any changes on the website.

**Evaluation Criteria:**

Saksham will be judged by a panel of experts. Following are the broad guidelines for judging:

1. Innovation and creativity in the method used or product developed will be given high weightage.
2. Implement ability of the product to be assessed on the following parameters:
  - a. Technical feasibility
  - b. Cost of the product
  - c. Usability
  - d. Acceptability
  - e. Market Value and acceptance
  - f. Reliability/ durability of the product or method developed
  - g. Number of industrial visits and implementation of product (if happened)
3. Performance
4. Ergonomics if the team decides to make a well-designed product.

In case of any dispute, decision of the organizers or Judges will final and binding on all.

**International Participants:**

All international participants will have to register before 18th November 2016, and will have to submit the complete report along with video prototype before 18th November 2016. The shortlisted international team details will be put up on the website by 21st November 2016.

**Certificate policy:**

Only those teams that are shortlisted for the finals and also give a final presentation about their work during Techfest 2016-17 would be awarded a Certificate of Participation. The top entries from this event would be provided with Certificate of Excellence.

**Team Specifications:**

The participating entries must be in a team of a maximum of **4[four]** people. One of the team member must be a **female participant**. If the participating team feels that their idea requires more participants in their team, they can forward their request, with suitable reasons, to [saksham@techfest.org](mailto:saksham@techfest.org) with the subject "**Ideate: Saksham team number increase**"

**Timeline :**

First Project Report Submission	September 15, 2016	Submission of first project report.
Mentorship Stage	October 15, 2016 to November 05, 2016	Mentors will be allocated for the guidance of the participants.
Last Date of Registration	November 18, 2016	Participants competing in the competition need to register before this date.
Final Project Report Submission	November 18, 2016	Submission of final project report along with video prototype (if any) has to be submitted before this date.
Declaration of Result	November 21, 2016	Declaration of shortlisted teams for final presentation at Techfest, IIT Bombay on the basis of final report and the supporting materials.
Improvisation Stage	November 21, 2016 to November 30, 2016	Shortlisted participants are to improve upon their model and prepare a presentation for the final round.
Final Presentation and Video submission	December 1, 2016	Participants have to submit the final video of prototype and presentation to be displayed during the festival before this date.
Presentation Stage	December 16, 2016 to December 18, 2016	Final presentation along with demonstration of working prototype.